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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/679,716	10/04/2000	Joel Soderberg	13768.169	7348

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EXAMINER

NGUYEN, QUANG N

ART UNIT	PAPER NUMBER
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2141

DATE MAILED: 06/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/679,716

Applicant(s)

SODERBERG ET AL.

Examiner

Quang N. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-18,20-25 and 27-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-18, 20-25, and 27-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 October 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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Detail Action

1. This Office Action is in response to the Amendment A filed on 04/15/2004. Claims 2, 19 and 26 have been cancelled. Claims 1, 3-18, 20-25 and 27-33 are presented for examination.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1, 3-6, 8-18, 20-21, 23-25, 27-28 and 30-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mighdoll, in view of Fielding et al. (Hypertext Transfer Protocol, Network Working Group, "<http://www.ietf.org/rfc/rfc2616.txt>", June 1999), herein after referred as Fielding.**

4. As to claims 1 and 3, Mighdoll teaches a client system (*WebTV client 1*), a front-end server (*WebTV server 5*), and one or more back-end servers (*remote servers 4*), all interconnected with a communication link (*as illustrated in Fig. 1*), wherein the client

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system periodically accesses content stored on the one or more back-end servers through the front-end server, the method comprising:

(a *WebTV server 5*) receiving a request for content from the client system (a *WebTV client 1*, step 901 of Fig. 9);

directing the request to a particular back-end server (*WebTV server 5* accesses a remote server 4 based on the address provided in the document requested from the *WebTV client 1*, step 903 of Fig. 9);

receiving from the particular back-end server, a redirect response identifying one or more other back-end servers where the content is stored (*the remote server 4* responds with a redirect to the *WebTV server 5*, step 904 of Fig. 9);

automatically and without client system intervention, redirecting the request to a redirect back-end server, the redirect back-end server being one of the one or more other back-end servers identified in the redirect response (*the WebTV server 5* accesses the requested document according to the redirect access, step 906 of Fig. 9);

receiving the requested content from the redirect back-end server; and sending the requested content to the client system (*the requested document is retrieved and downloaded to the WebTV client 1 by the WebTV server 5*, step 907 of Fig. 9) (Mighdoll, C12: L52-67 and C13: L1-30).

However, Mighdoll does not explicitly teach adding a front-end indicator to a hypertext transfer protocol User Agent header of the request to indicate that the front-end server is making the request on behalf of the client system.

In the related art (*RFC2616*), Fielding teaches the Hypertext Transfer Protocol (HTTP) is an application-level protocol for distributed, collaborative, hypermedia information systems, which has been in use by the World Wide Web global information, wherein a proxy server (*Web TV server 5*) is an intermediary program which acts as both a server and a client for the purpose of making requests on behalf of other clients. Fielding also teaches the HTTP request-header field could be extended by using header extension "User-Agent" to allow the client and/or the proxy server to pass additional information/comments identifying the user agent originating the request to the destination server (*allowing the proxy server to specify the destination server to send the response directly back to the device that originated the request, in this case to the proxy server, i.e., making the request for information on behalf of the client*) (Fielding, pages 37-38, 60-61, 137 and 145).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the teachings of Mighdoll and Fielding to include the act of adding a front-end indicator to a hypertext transfer protocol User Agent header of the request to indicate that the front-end server is making the request on behalf of the client system since such methods were conventionally employed in the art to allow the client and/or the proxy server to pass additional information about the request, to pass information/comments identifying the client and/or the proxy sever itself to the destination server by using the request-header fields to request information on behalf of the client.

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5. As to claims 4-5, Mighdoll-Fielding teaches the method of claim 2, wherein the direct response identifies a list of back-end servers, where the content is stored, is identified in a hypertext transfer protocol 305 Use Proxy response from the particular back-end server (*Fielding teaches the requested resource corresponds to anyone of a set of representations, each with its own specific location/URL, and must be accessed through the proxy server given by the Location field, i.e., the URI of the proxy server*) (Fielding, pages 38-39 and 60-63).

6. As to claim 6, Mighdoll-Fielding teaches the method of claim 4, further comprising the acts of requesting authentication credentials from the client system (*identified in a hypertext transfer protocol 401 Unauthorized or 407 Proxy Authentication Required, Fielding, pages 38-39 and 66*) and receiving proper authentication credentials from the client system (Mighdoll, C14: L19-31 and 54-57).

7. As to claim 8, Mighdoll teaches the method of claim 1, wherein the direct response identifies a single back-end server where the content is stored (*the remote server 4 responds with a redirect to the WebTV server 5, step 904 of Fig. 9*).

8. As to claim 9, Mighdoll-Fielding teaches the method of claim 8, wherein the single back-end server is identified in either a hypertext transfer protocol 301 Moved Permanently or 302 Moved Temporarily response from the particular server (*Fielding, pages 38-39 and 60-63*).

9. As to claim 10, Mighdoll teaches the method of claim 1, further comprising the acts of receiving the requested content from the redirect back-end server and sending the requested content to the client system (*the requested document is retrieved and downloaded to the WebTV client 1 by the WebTV server 5*) (Mighdoll, C13: L25-30).

10. Claims 11-13 are corresponding back-end server claims of front-end server claims 1-5; therefore, they are rejected under the same rationale.

11. Claims 14-17 are corresponding claims of claims 1, 4, 6 and 8; therefore, they are rejected under the same rationale.

12. Claims 18, 20-21 and 23-24 are corresponding method claims of front-end server claims 1, 4, 6, 8 and 10; therefore, they are rejected under the same rationale.

13. Claims 25, 27-28 and 30 are corresponding computer program product claims of front-end server claims 1, 4, 6 and 8; therefore, they are rejected under the same rationale.

14. Claims 31-33 are corresponding computer program product claims of back-end server claims 11-13; therefore, they are rejected under the same rationale.

15. Claims 7, 22 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mighdoll-Fielding, in view of Smith et al. (US 6,311,216), herein after referred as Smith.

16. As to claim 7, Mighdoll-Fielding teaches the method of claim 6, further comprising the act of receiving an authentication token that is associated with the authentication credentials (Mighdoll, C14: L19-31 and 54-57) but does not explicitly teach the act of using the authentication token as a key for hash operation to identify the redirect back-end server from the list of back-end servers identified in the redirect response.

In the related art, Smith teaches using the authentication token associated with the authentication credentials (which is included in the URL HTTP request) as a key for a hash operation to identify the most likely proxy server to contain the URL data object in its local cache by computing the hash value for the requested URL, the hash value for each of the proxy servers and the two hash values are then combined to give a value for each proxy server that is unique for the URL sought and the proxy server is chosen by taking the highest "score" or hash value (Smith, C10: L1-31 and C12: L19-33).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the teachings of Mighdoll-Fielding and Smith to include the act of using the authentication token as a key for hash operation to identify the redirect back-end server from the list of back-end servers identified in the

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redirect response since such methods of using hashing algorithms were conventionally employed in the art to allow the redirection/proxy/front-end server to select the best or most likely back-end server that contains the requested content from a list of available back-end servers to serve the client without making expensive query-response transactions or routing the URL data object request through multiple back-end servers.

17. Claim 22 is a corresponding method claim of front-end server claim 7; therefore, it is rejected under the same rationale.

18. Claim 29 is a corresponding computer program product claim of front-end server claim 7; therefore, it is rejected under the same rationale.

Response to Arguments

19. In the remarks, applicant argued in substance that

(A) Prior Arts fail to teach, suggest, or motivate "front-end server adding a front-end indicator to the request in order to indicate that the front-end server is making the request on behalf of the client system."

As to point (A), in the "<http://www.ietf.org/rfc/rfc2616.txt>", Fielding teaches the Hypertext Transfer Protocol (HTTP) is an application-level protocol for distributed, collaborative, hypermedia information systems, which has been in use by the World Wide Web global information, wherein ***a proxy server is an intermediary program which acts as both a server and a client for the purpose of making requests on behalf of other clients*** (section 1.3). Fielding also teaches the HTTP request-header field could be extended by using header extension "User-Agent" to allow the client and/or the proxy server to pass additional information/comments identifying the user agent (*client and/or proxy server*) originating the request to the destination server (section 5.3) (***allowing the proxy server to specify the destination server to send the response directly back to the device that originated the request, in this case to the proxy server, i.e., making the request for information on behalf of the client***). In addition, Fielding does teach the requested resource corresponds to any one of a set of representations (*i.e., the list of back-end servers where the content is stored*), each with its own specific location, and agent-driven negotiation information is being provided so that ***the user agent (client and/or proxy server) can select a preferred presentation and redirect its request to that location and depending upon the format and the capabilities of the user agent, selection of the most appropriate choice maybe performed automatically*** (section 10.3.1) (Fielding, pages 7-9, 37-38, 60-61, 137 and 145). Hence, Prior Art does teach, suggest, or motivate "front-end server adding a front-end indicator to the request in order to indicate that the front-end server is making the request on behalf of the client system."

20. Applicant's arguments as well as request for reconsideration filed on 04/15/2004 have been fully considered but they are not deemed to be persuasive.

21. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quang N. Nguyen whose telephone number is (703) 305-8190.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's SPE, Rupal Dharia, can be reached at (703) 305-4003. The fax phone number for the organization is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3800/4700.

Quang N. Nguyen



LE HIEN LUU
PRIMARY EXAMINER